

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number
WO 2005/066660 A2

(51) International Patent Classification⁷: G01V 1/28

(21) International Application Number:
PCT/GB2004/050044

(22) International Filing Date:
23 December 2004 (23.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0400423.0 9 January 2004 (09.01.2004) GB

(71) Applicant (for all designated States except US): STATOIL
ASA [NO/NO]; N-4035 Stavenger (NO).

(71) Applicant (for IS only): ROBINSON, John [GB/GB];
Marks & Clerk, 4220 Nash Court, Oxford Business Park
South, Oxford Oxfordshire OX4 2RU (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): EL OUAIR,
Youness [MA/NO]; Hølbekken 21 C, N-7092 Tiller (NO).

BULAND, Arild [NO/NO]; Heggdalsringen 9, N-7048
Trondheim (NO). EIKEN, Ola [NO/NO]; Karisvingen
14B, N-7040 Trondheim (NO).

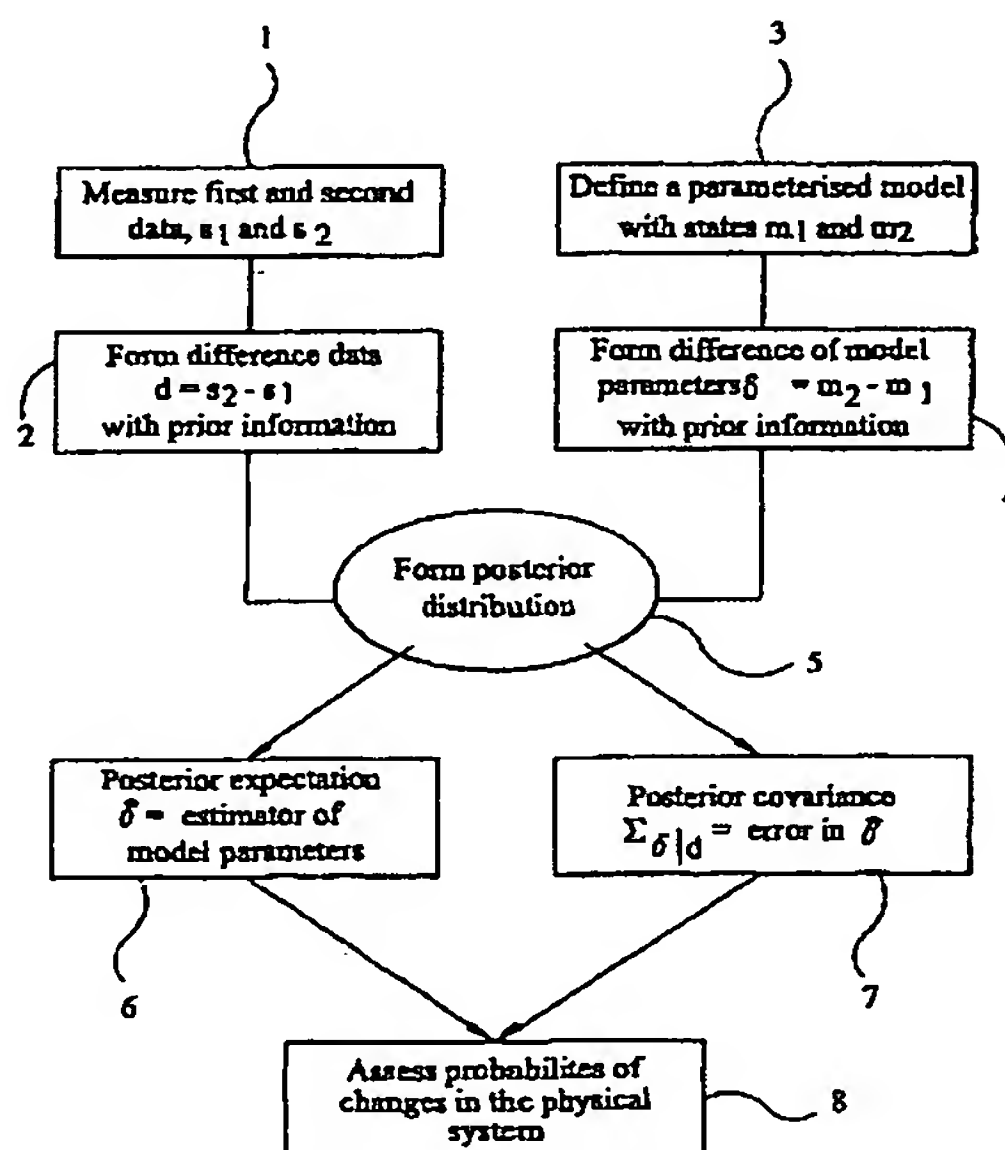
(74) Agent: ROBINSON, John; Marks & Clerk, 4220 Nash
Court, Oxford Business Park South, Oxford Oxfordshire
OX4 2RU (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: PROCESSING SEISMIC DATA REPRESENTING A PHYSICAL SYSTEM



(57) Abstract: Processing seismic data representing a physical system A method is provided for processing seismic data representing a physical system, such as seismic reflection data representing a region of the Earth. The method forms a difference (2) between first and second measured data (1) representing the system in first and second states, respectively, for example at different times. The difference is inverted (5) in accordance with a parameterised model (3, 4) of the physical system to obtain changes (6, 7) in the parameters of the model.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*